

## CCSS-945 Model

9×14 mm SMD, 5.0V, SineWave

**Frequency Range:**  
**Frequency Stability Options(ppm)**  
**Temperature Range:**  
(Option M)  
(Option X)

10 MHz to 125 MHz  
±20, ±25, ±50  
(standard) 0°C to 70°C  
-20°C to +70°C  
-40°C to +85°C  
-45°C to +90°C

**Storage:**

**Input Voltage:**  
**Input Current:**

5.0V ± 0.5V  
30mA Max

**Output:**

Output Power:  
Start-up time:  
Load:

True SineWave  
+5 dBm Min, +7 dBm Typical  
2ms Typical, 5ms Max  
50 ohms

**2nd Harmonic:**  
**Sub-harmonics:**

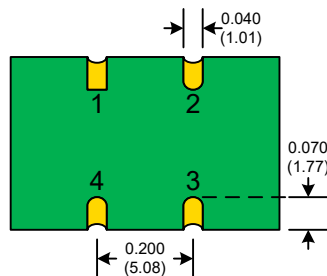
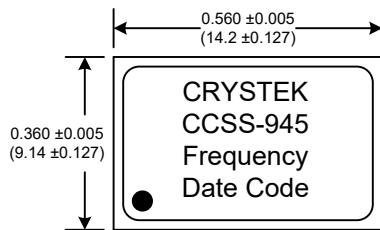
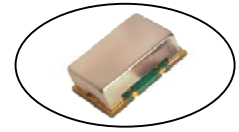
-25 dBc Typical  
None

**Phase Noise Typical:**  
(@100MHz)

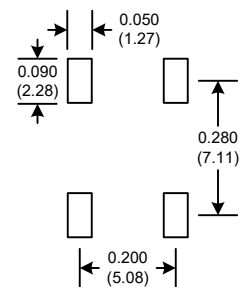
10Hz	-85 dBc/Hz
100Hz	-120 dBc/Hz
1kHz	-145 dBc/Hz
10kHz	-162 dBc/Hz
100kHz	-170 dBc/Hz
1MHz	-170 dBc/Hz

**Aging:**

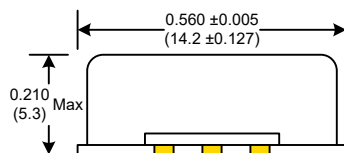
<3ppm 1<sup>st</sup> year, <1ppm every year thereafter



### SUGGESTED PAD LAYOUT



**PAD FINISH:** Immersion Gold (ENIG); 5 micro inches maximum



Pad	Connection
1	NC
2	GND
3	OUT
4	Vdd

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**Crystek Part Number Guide**

CCSS - 945 X - 25 - 125.000

#1 #2 #3 #4 #5

#1 Crystek 9×14 SMD SineWave Clock  
#2 Model 945 = Ultra Low Noise 5.0V  
#3 Temp Range: Blank = 0/70°C, M = -20/70°C, X = -40/85°C  
#4 Stability: (see Table 1)  
#5 Frequency in MHz: 3 or 6 decimal places

**Example:**

CCSS-945X-25-100.000  
5.0V, -40/85°C, ±25ppm, 100.000 MHz

**Stability Indicator**

Blank ± 100ppm  
50 ± 50ppm  
25 ± 25ppm  
20\* ± 20ppm

\*not available in -40/85

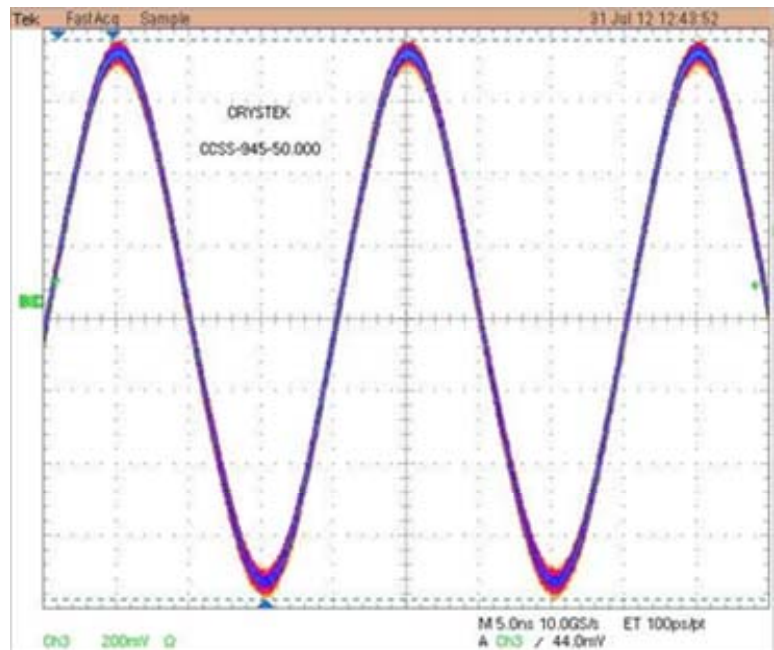
Table 1

**Standard Frequencies MHz**

10.000  
50.000  
80.000  
100.000  
122.880  
125.000

**RECOMMENDED REFLOW SOLDERING PROFILE**  
900034 (See App Note listed on website)

<http://www.crystek.com/specification/reflow/900034.pdf>



**Mechanical:**

Shock: MIL-STD-883, Method 2002, Condition B  
Solderability: MIL-STD-883, Method 2003  
Vibration: MIL-STD-883, Method 2007, Condition A  
Solvent Resistance: MIL-STD-202, Method 215  
Resistance to Soldering Heat: MIL-STD-202, Method 210, Condition I or J

**Environmental:**

Thermal Shock: MIL-STD-883, Method 1011, Condition A  
Moisture Resistance: MIL-STD-883, Method 1004

**Packaging:**

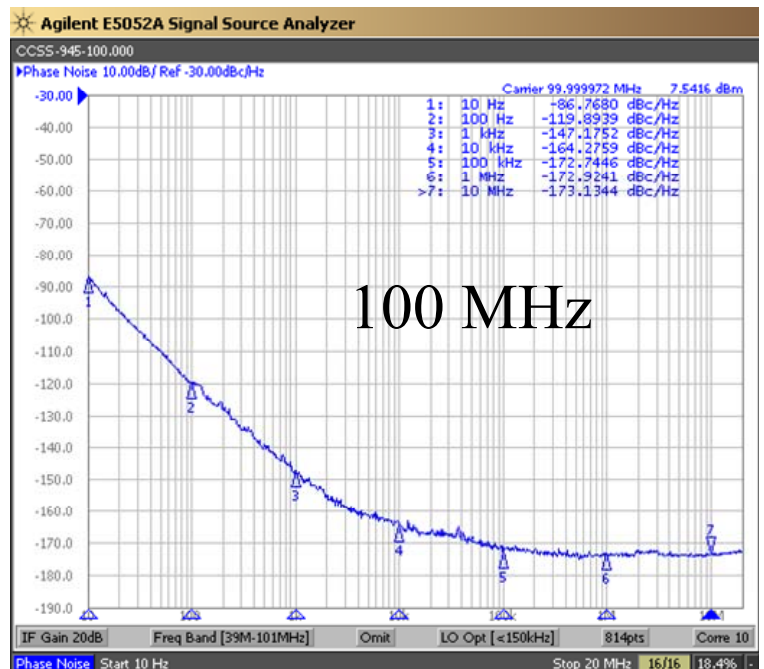
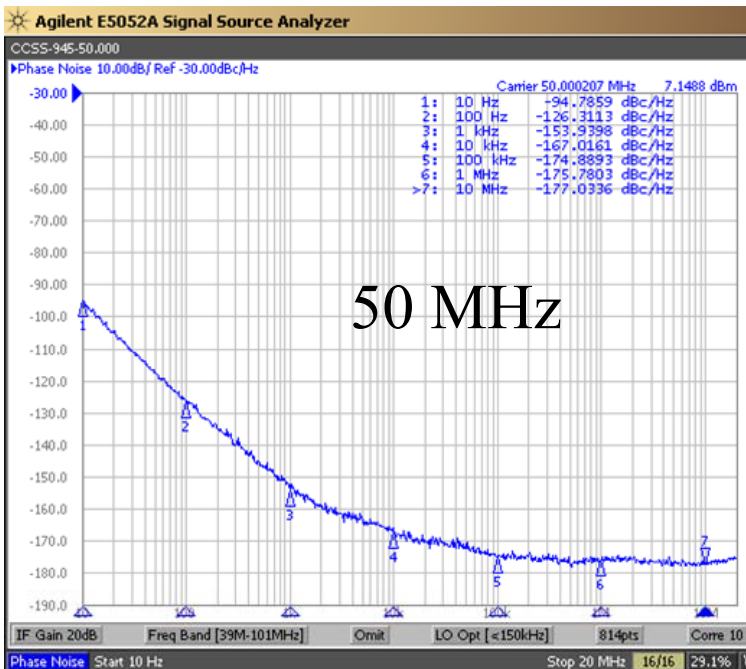
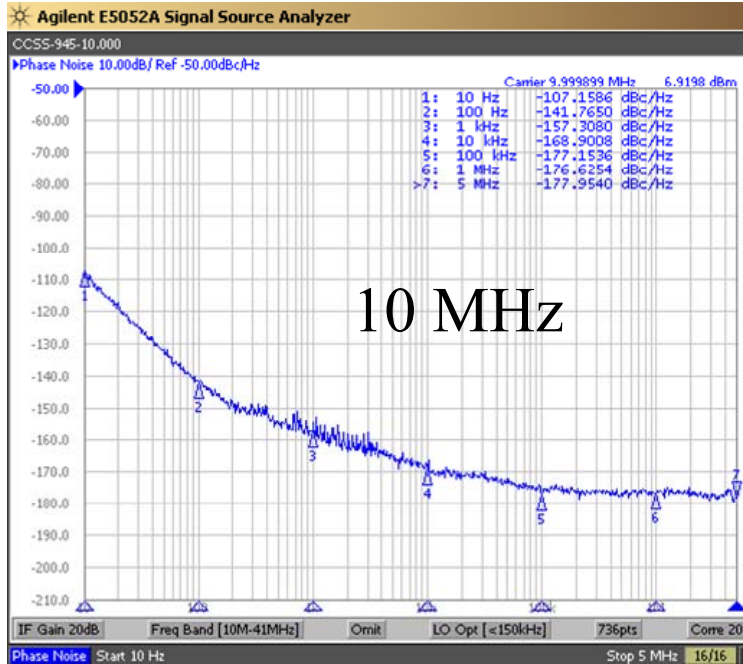
Tape/Reel: 100ea, 250ea, 500ea 24mm Tape

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